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Pacific Islands Fishery News

NEWSLETTER OF THE WESTERN PACIFIC REGIONAL FISHERY MANAGEMENT COUNCIL

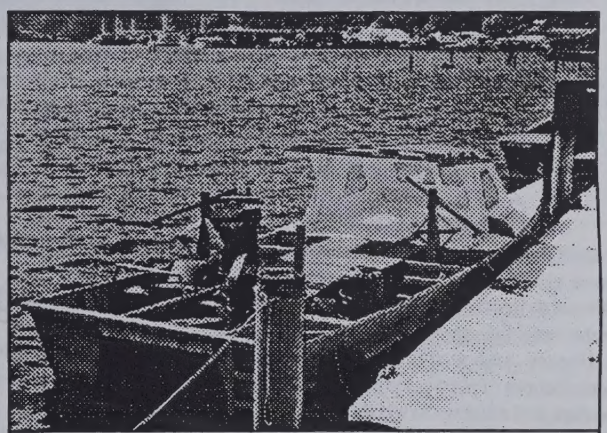
Summer 1997

Homegrown Longline Industry Blossoms in American Samoa

Four years ago, the local longline industry in American Samoa was virtually non-existent. In 1996, local longliners harvested 232,700 pounds of albacore with a dockside value of over a quarter of a million dollars. What was once a fishery based largely on trolling has transformed into a domestic longline fishery that is poised for even greater growth.

The cause can be traced directly to the success of the longline fishery in neighboring Western Samoa, which annually exports about 700 tons of tuna, mainly albacore, to canneries in American Samoa. Western Samoan style longline gear on traditional "alia" boats began appearing in American Samoa in the early 90's. The open-decked, catamaran style alias are made of aluminum or wood with fiberglass, powered by a gasoline outboard. At around 30 feet long, the flexible alia design can be outfitted for trolling, bottomfishing or longline fishing.

The main gear feature is a hand-crank reel which can store up to 10 miles of monofilament line. Each vessel sets an average of 188 hooks per day. In the early stages, Western Samoan fishermen were employed until local fishermen became familiar with the technology. Because of the gear configuration, alia vessels are required to comply with federal longline regulations, including submitting log books. In 1994, longline albacore landings in American Samoa totaled 2,000 pounds. With four alia vessels joining the fishery in the latter half of 1995, landings increased to 50,000 pounds. Last year, the Department of Marine and Wildlife Resources reports, the alia fleet consisted of 13 vessels and was the main reason total domestic albacore landings increased by 400 percent. A trolling-based fishery continues to operate in American Samoa and takes a larger share of skipjack and yellowfin tunas, but doesn't take any albacore or big-eye. Trolling now accounts for less than half of the total tuna catch.



Typical alia boat of American Samoa at dockside in Pago Pago.

This method of fishing is superior to trolling in terms of greatly improved catches and reduced fuel expenses. For every 1,000 hooks deployed by the longline alia vessels, 40 albacore are caught, by far the most of any species.

Alias typically fish with a crew of three in an 8-hour fishing day. The catch is frozen until enough is accumulated to sell to the canneries. Prices for all pelagic fish remained relatively low during 1996, probably due to competition from foreign longline vessels.

The locally caught albacore sent to the canneries is still a tiny fraction of the 79 million pounds processed in 1996, but it represents one of the first significant local contributions to the cannery.

The success of the alia fishermen is causing others to think seriously about expanding the local longline fishery.

The market potential hasn't escaped notice by outsiders. Hawaii-based Airways International recently began service between Honolulu and Pago Pago in the hope of capitalizing on a potential new source of fresh tuna and other fish.

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Pacific Islands Fishery News

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Telephone: (808) 522-8220; Fax: (808) 522-8226.

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Looking for a Few Good Pictures

Pacific Islands Fishery News is looking for good quality photographs featuring the Western Pacific Region, particularly commercial fishing photos. We are building a library and would appreciate any contributions of photographs, slides, videos, posters, and other materials that capture life and work in the Western Pacific fishery. It may be in color or black-and-white. We hope to receive enough free material to produce a calendar for 1998. For more information call Mark Segami at (808) 522-6044.

Hawaii Rep. Neil Abercrombie recently visited the Council office for a briefing on the Council's activities. Abercrombie, a member of the House Subcommittee on Fisheries, also provided Council members with a perspective from Washington on current issues facing Congress. Above, from left to right, Council members William Paty, Frank Farm, Executive Director Kitty Simonds, Rep. Abercrombie and Council Chairman Jim Cook.

Weather Fronts Could Predict Fishing Success

North of the Hawaiian archipelago and stretching across the central north Pacific Ocean is a region oceanographers refer to as the Subtropical Front Zone (STFZ) -- a broad band of ocean where cooler, less salty water from the north joins with warmer, saltier waters from the south.

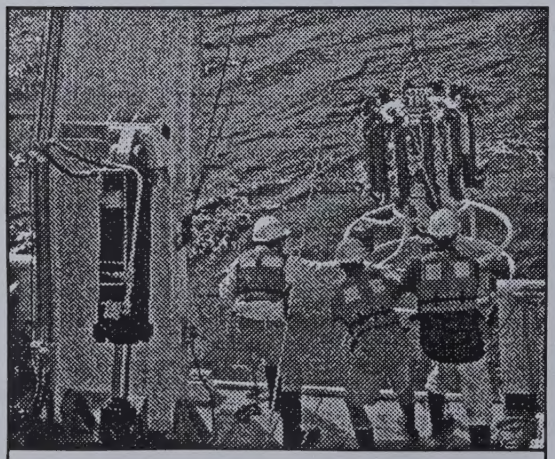
Of particular interest to fishermen is the southernmost front, which is especially noticeable during the winter and spring months because of the relatively sharp changes in surface temperatures. In recent years, commercial fishing vessels targeting species such as swordfish and albacore tuna have concentrated their efforts in this stretch of ocean.

It is also a stretch of ocean where the Ecosystem and Environmental Investigation of the National Marine Fisheries Service's Honolulu Laboratory (NMFS) has focused its research to better understand the relationship between this southern front and swordfish resources. The results of this research will help fisheries managers better understand the changes in the distribution and abundance patterns of swordfish.

Fronts are formed when two different water masses meet. Fronts play a major role in determining ocean currents and typically lead to regions of higher productivity and greater food availability, thus attracting pelagic fishes.

In April-May, NMFS scientists conducted a 25-day cruise aboard the ship Townsend Cromwell. NMFS fishery biologist Michael Seki, who spearheaded the cruise, reported that the southern front was at least 180 nautical miles farther south than expected. The shift probably explains the recently reported increase in effort and fishing success by commercial swordfish vessels which took place farther south than normal.

(Continued on Page 3)



Above, National Marine Fisheries Service scientists setting the instruments to measure water properties in their studies of weather fronts, ocean currents and their relationship to migratory swordfish stocks.

Weather Patterns May Also be Affecting Tuna Catches in Kona

Kona handline fishermen report that in the past 10 years, the prevailing current pattern off the Kona Coast has changed dramatically. The current is now highly variable and unpredictable. Fishermen relate this change with a decrease in tuna availability at *ahi koa*, which can be described as sea bottom features that create localized areas of enhanced productivity and tuna aggregation. Current direction and strength is one of the key environmental factors that *ahi koa* fishermen relate to successful tuna fishing. A significant change in current predictability is understandably a cause for concern.

This is one of the interesting findings of a project titled, "*Local Fisheries Knowledge: Its Application to the Management and Development of Small-scale Pelagic Fisheries in the U.S. Pacific Islands*," being conducted by principal investigators John Kaneko and Paul Bartram of PacMar, Inc., of Honolulu.

A plausible explanation has been identified by linking scientific research on weather, current and fish aggregation with local fishermen's knowledge about tuna behavior and catchability off Kona.

National Marine Fisheries scientist Michael Seki has studied the relationship between the position of the Kona Eddy, a dominant weather feature on the Kona Coast, and billfish catches in the 1995 Hawaiian International Billfish Tournament. Seki reported that in Hawaii, a combination of prevailing northeasterly trade winds and high mountains can generate strong eddies or current swirls off the leeward side of the islands. Ocean conditions off the Kona Coast are often dominated by a large eddy, which generates a strong north-northwest ocean current running up the coast toward Keahole Point.

The exact position and strength of the Kona Eddy is directly influenced by the strength and direction of the prevailing trade winds. The weakening and greater variability of trade winds over the past 10 years are likely the cause of the change in ocean current patterns and the decline in tuna catchability noted by fishermen. Productivity at ahi koa likely depends on the specific current conditions which concentrate feed and tuna.

The investigators are attempting to bridge scientists' and fishermen's knowledge about pelagics fisheries by interviewing fishermen who have fished on the Big Island for 15 to over 60 years. The sharing and exchange of knowledge between fishermen, fisheries scientists and fisheries managers is a natural way to enhance communications and improve the fisheries management process.

Bartram and Kaneko's project is part of the overall efforts of the Pelagic Fisheries Research Program (PFRP) at the Joint Institute of Marine and Atmospheric Research at the University of Hawaii. PFRP is aimed at biological, sociological and economic studies of pelagic fisheries which can help to improve fisheries management in the western Pacific.

This article was contributed by Paul Bartram and John Kaneko of PacMar, Inc., of Honolulu.

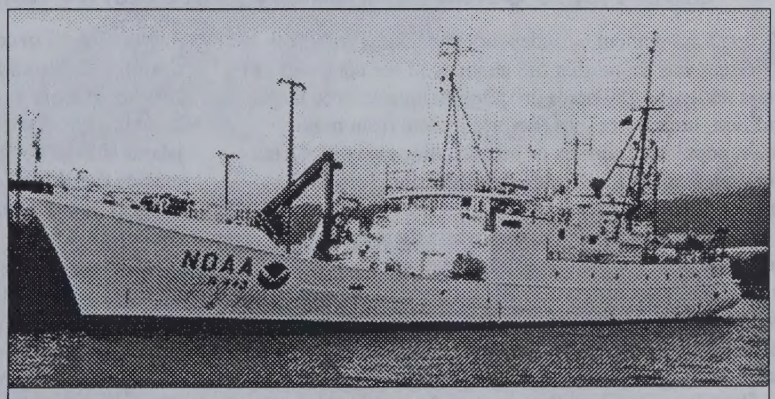
Weather Fronts Could Predict Fishing Success

(Continued from Page 2)

Satellite altimetry data confirmed the southward shift and indicated that the shift appears to have occurred across the entire central Pacific Ocean. Satellites are able to measure the ocean's height to within a quarter of an inch.

Sensors on the ship's hull continuously measured the speed and direction of ocean currents, as well as the temperature and salinity of the ocean surface.

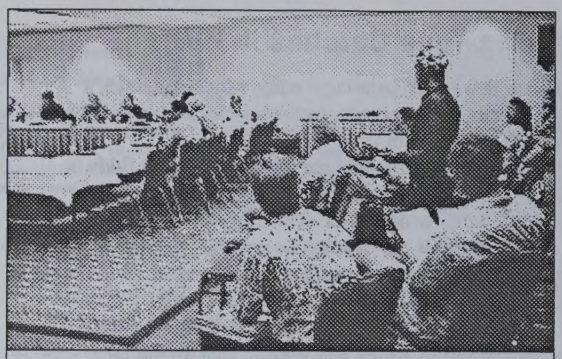
From these data, maps are produced showing the distribution of the various water properties and are used to identify and characterize the fronts. The maps can then be compared with landings of swordfish and other species collected by various fisheries agencies.



The NOAA research vessel Townsend Cromwell.

The cruise was the second in a series of cruises to collect information to help characterize the frontal system with respect to swordfish habitat preferences.

Edited from a article contributed by Michael Seki, Fishery Biologist, National Marine Fisheries Service.



A member of the audience addresses the Council during one of the many opportunities for public comment at the 92nd Meeting.

93rd Council Meeting Set for August 19-21

Decisions with far-reaching implications highlight the upcoming 93rd Meeting of the Western Pacific Regional Fishery Management Council on August 19-21, 1997, at the Ala Moana Hotel in Honolulu, Hawaii.

Guest speaker Pat Caldwell of the National Oceanographic Data Center will present bathymetric surveys of areas under the Council's jurisdiction.

Major action items on the agenda include whether to include all waters of the Council's EEZ in an international management regime for tunas in the central and western Pacific, consideration of a management plan for coral reefs in the Council's jurisdiction, and including special provisions for Native Hawaiian fishermen in a limited entry bottomfish program for the Mau Zone in the Northwestern Hawaiian Islands.

QUARTERLY PLANNER

JULY

28	**Bottomfish Task Force & Hawaii PT/AP Meeting** Ala Moana Hotel, Plumeria Room Honolulu, Hawaii	8:30 am - 5:00 pm
29	**Ecosystems & Habitat Meeting** Executive Centre, Suite 4003 Honolulu, Hawaii	8:30 am - 5:00 pm
29	**Precous Corals Plan Team Meeting** DLNR Honolulu, Hawaii	1:00 - 5:00 pm
30	**Hawaii/American Samoa Pelagics Advisory Panel/All Plan Team Meeting** Ala Moana Hotel, Ilima Room Honolulu, Hawaii	8:00 am - 5:00 pm
31	**Hawaii Crustaceans Plan Team Meeting** Executive Centre, Suite 306 Honolulu, Hawaii	8:30 am - 5:00 pm

AUGUST

5-7	**66th Scientific & Statistical Committee Meeting** King Kamehameha Hotel Kailua-Kona, Hawaii	8:00 am - 5:00 pm
12	**VMS Committee Meeting** Executive Centre, Suite 302 Honolulu, Hawaii	8:00 am - 12 pm
14-15	**Native Rights Advisory Panel Meeting** Ala Moana Hotel, Plumeria Room Honolulu, Hawaii	8:00 am - 5:00 pm
18	**PIAFA & FDCC Meetings** Ala Moana Hotel, Pakalana/Anthurium Rooms Honolulu, Hawaii	8:00 am - 5:00 pm
19-21	**93rd Council Meeting** Ala Moana Hotel, Garden Lanai Honolulu, Hawaii	8:00 am - 5:00 pm

Coral Reefs Generally Healthy in Western Pacific EEZ, Study Says

A 1997 assessment by independent consultant Alison Green has found that the majority of the coral reefs in waters under the Council's jurisdiction appear to be in good condition, largely because they are remote from major human population centers or because they enjoy protected status, such as the Hawaiian Islands National Wildlife Refuge in the Northwestern Hawaiian Islands.

Green's study concludes that while there is no immediate need for the Council to develop a fishery management plan for coral reefs, it recommends that the Council re-evaluate the issue at regular intervals, perhaps every three to five years, or sooner if significant changes occur which could harm coral reef health.

Green's study found that most of the coral reefs in the Council's jurisdiction appear to be either unfished or lightly fished. Their relatively good condition is in stark contrast to many of the nearshore reefs in state or territorial waters, which appear to have been damaged by a combination of human actions, including overfishing and habitat degradation.

Another recommendation is that the Council become more involved in coral reef issues in the region. For example, the island of Farallon de Medinilla in the Northern Mariana Islands is currently used as a military bombing target with plans to expand operations. The island has the largest area of coral reef in federal waters outside the Hawaii. The assessment cautions about the dangers posed by mistargeted bombs which could damage the coral reefs.

The assessment also states that a mounting body of evidence suggests that the coral reef resources in state and territorial waters in the region are being over-exploited and degraded, particularly in Guam and Hawaii.

Green's study will be reviewed by the appropriate advisory groups and by the full Council at its 93rd meeting on August 19-21, 1997, in Honolulu.

The assessment was jointly funded by the Council, the National Oceanographic and Atmospheric Administration, and the National Fish and Wildlife Foundation.

Edited from an article contributed by Alison Green.

Hawaii Longline Fishing Action is Hot

Since the beginning of the year, swordfish and albacore have constituted some of the hottest action around Hawaiian waters. This should continue for a while longer, but the industry is waiting to see if the action tapers off around late July, the seasonal end. If favorable conditions persist say industry observers, the albacore catch may continue. Other species showing large increases in catch compared with last year are bigeye tuna and mahimahi.

Brooks Takenaka, manager at the United Fishing Agency auction in Honolulu, said there has been a slight problem with so many boats taking shorter trips and returning, creating a bit of a waiting line to unload their catches.

Takenaka said the yellowfin activity has been less than normal, but no one yet has offered a plausible explanation. Similarly, April and May saw some very large aku (skipjack) turn up, which was unexpected. Now fishermen and marketers are wondering if this unusual occurrence means there will be a change in the aku run.

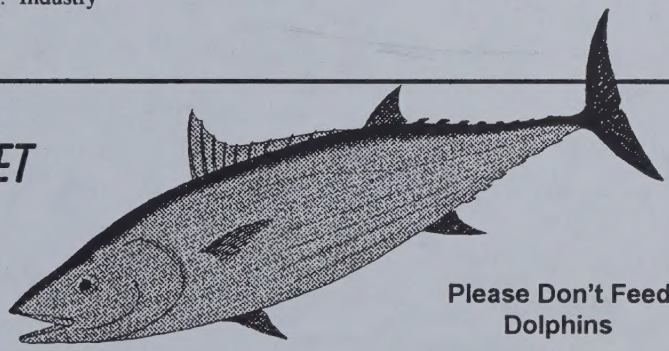
Much work has gone into the development of Mainland U.S. markets for swordfish. But with airlines cutting back flights and changing to smaller aircraft, it could mean less cargo space to ship products. Whether this is having a negative impact on Hawaii in terms of lost opportunities and revenue is a big question. Industry analysts are watching closely.

Catch by Species
Number of Fish Caught by Hawaii-Based Longline Vessels

Species	Jan-Mar '97	Jan-Mar '96
Bigeye tuna	27,483	15,749
Albacore tuna	23,683	14,775
Broadbill Swordfish	16,641	9,842
Mahimahi	19,653	4,646
Yellowfin tuna	8,052	7,635
Skipjack tuna	4,812	1,340
Spearfish	3,620	2,255
Striped Marlin	3,237	5,850
Others (Bluefin tuna, moonfish, oilfish, ono, pomfret)	5,987	4,678

Source: National Marine Fisheries Service

OFF THE INTERNET



PNG Tuna Have an Appetite for Latex

Reports out of Papua New Guinea tell the story of fishermen from Buka Island who are purchasing condoms at an astounding rate. According to the Papua New Guinea Post Courier, shops are running low on supply as is the local hospital. But it seems that the condoms are not being used for their intended purpose. Instead, residents report that fishermen are using the prophylactics as lures to catch tuna, which seem to prefer the condoms over ordinary lures.

Other reports say the Buka islanders learned this from Manus, where condoms have been used successfully to catch fish. As the condoms are trolled behind boats, they fill up with water. The tuna, apparently, find this irresistable.

Not surprisingly, this development has led to an abundance of jokes.

Please Don't Feed the Dolphins

In May, the National Marine Fisheries Service (NMFS) issued a reminder to the public that it is illegal to feed or swim with dolphins in the wild. In Florida, dolphin feeding has become very popular and NMFS has contracted with the Florida Marine Patrol to provide additional enforcement during 1997. In 1998, NMFS expects to fund an additional six enforcement officers for protected species enforcement, including dolphin feeding and harassment.

Shark Cartilage Not a Cancer Cure-All

A study presented at the Annual Meeting of the American Society of Clinical Oncology in Denver in May, concluded that shark cartilage was inactive in patients with advanced stages of breast, colon, lung and prostate cancer.

AROUND THE WESTERN PACIFIC REGION

Effects of El Nino May Already Be Affecting Industry in Western Pacific

A major El Nino episode, or general warming, is already having an impact around the Pacific and will last at least through early 1988, according to weather forecasters.

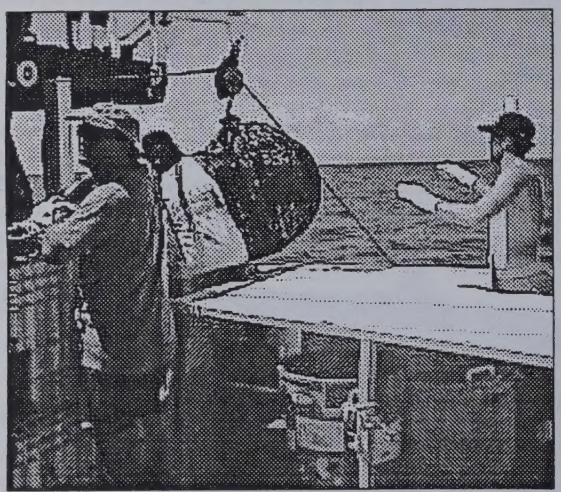
Drier climates in the western Pacific, which are normally associated with the El Nino climate, are occurring in places like Indonesia and Guam.

The Guam Visitors Bureau said the lush, tropical island vegetation is turning brown. Although tourism has not been affected, fishing industry observers blame El Nino for a slowdown in the number of port calls being made by fishing vessels throughout Micronesia.

The National Oceanic & Atmospheric Administration's Climate Prediction Center is projecting the warming of ocean surface temperatures will increase through the remainder of the year. In the eastern Pacific, El Nino is causing wetter than normal conditions, including flooding in Chile, Argentina, Uruguay and Brazil.

The threat from hurricanes is also greater during El Nino. The last big episode in 1982-83 caused billions of dollars in damage worldwide, including Hurricane Iwa, which hit Hawaii in 1982.

As the warmer temperatures increase, it is likely to produce more and stronger disturbances, like storms.



Above and right, lobster boat crew members go through a shakedown cruise and ready the traps in preparation for the opening of the 1997 lobster season for the Northwestern Hawaiian Islands. The season opened July 1 and closed three weeks later, on July 22, with fishermen reaching the quota of 322,912 lobsters. Preliminary reports indicate that the number of slipper lobsters caught was larger than expected.

Tinian May Get First-Class Tuna Facility

Port authorities in the Commonwealth of the Northern Mariana Islands are negotiating a long-term lease with Japanese interests to establish a first-class tuna packaging plan on the island of Tinian, according to news reports.

The fish handled by the proposed facility would be flown directly to the Japan market to meet demand for sashimi-grade tuna.

The Commonwealth Ports Authority is negotiating with Guam Y.T.K. Corp., a Japanese-owned company, for the plant to be built on the premises of the port of Tinian.

A Western Pacific Recipe

AHI POKI ROLL

Filling:
1 1/2 lbs. fresh ahi, chopped
2 Tbsp. white onion, chopped
2 Tbsp. green onion, chopped
1/4 tsp. cayenne pepper
1 1/2 Tbsp. soy sauce
1/2 tsp. sesame oil
1/4 tsp. Hawaiian salt
2 Tbsp. ogo (seaweed), chopped
Lumpia wrappers

Mix first eight ingredients in a bowl. Spoon generously onto lumpia wrapper and roll. Use a little water on edges to seal wrappers. Fry on both sides until just brown. Serve with honey mustard sauce.

Honey Mustard Sauce
1 Tbsp. dry mustard mixed with a little water
1 1/2 Tbsp. honey
2 Tbsp. cream
1/2 - 1 tsp. sesame oil
1/2 tsp. soy sauce.

Mix ingredients together until smooth and free of any lumps. Serve as a dipping sauce.

Courtesy of Chef Alan Ballesteros, Henry Loui's Restaurant, Honolulu, Hawaii.

Visit the Council's Web Site at: www.wpcouncil.org